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AUTHOR Dunbar, Nancy R.
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ABSTRACT

One approach to field theory in argumentation begins with a description of argumentation and, by identifying similarities or regularities in discursive practice, attempts to induce the nature and characteristics of a field. The controversy surrounding the use of Laetrile, a proposed cancer treatment, provides an example of this approach. Assuming that the articles on the subject represent a field of argument, one can look beyond individual issues, such as defining the nature of the Laetrile problem and determining if it is toxic, in order to arrive at some principle indicating how issues stand in relation to one another. This locates the unity of the field or argument, not in either the content or the disciplinary purposes of the arguers, but in the proposition of the question of whether the medical community should conduct a clinical trial of the drug. The proposition points to a set of issues that must be addressed in order to make a judgment on it. Thus it is the nature of the proposition that provides the most productive way to identify a field of argument. Such a view makes it possible to see the connections among all the elements of argumentation. It also recognizes the possibility that a given institution or professional group can address more than one kind of proposition, or alternatively, that a given subject matter may find similar treatment in more than one professional group. (HOD)

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MEDICAL ARGUMENT AND FIELD THEORY: THE LAETRILE CASE

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In recent years there has been a rapidly growing body of literature in field theory in argumentation. I have argued elsewhere that the literature thus far has been primarily theoretical in approach and that critical studies could provide an important contribution to that literature.[1] Briefly stated, the rationale for critical studies is as follows. The early literature on field theory attempted to define the nature of a field, determine a field's distinguishing characteristics, and the like. These theoretical formulations allowed for critical applications to particular instances of argumentation. Such applications of necessity assume a particular perspective on the nature of a field; they, for example, identify the content of the argumentation, the nature of the evidence used, the institutional setting of the argumentation, or some other characteristic or set of characteristics as the determinant(s) of a field. An alternative approach begins with a description of argumentation and, by identifying similarities or regularities in discursive practice, attempts to induce the nature and characteristics of a field. In contrast to the critical application of a theoretical framework which tests theory, this critical approach attempts to build theory.[2]

This paper represents a report on one part of a larger study.[3] In order to clarify the purpose and limitations of this paper, it is necessary to provide a sketch of the larger critical study. That study asks how argumentation varies according to the context in which it occurs and attempts to employ the critical approach referred to above. I have chosen Laetrile, the alleged cancer cure, as the subject matter because, compared to other

public issues, it is relatively narrow in scope and because it is widely discussed by doctors, lawyers, politicians, bureaucrats, special interest groups and writers in the popular press. The study describes the argumentation on Laetrile from these various sources and attempts to identify, in the discourse, the patterns in expression of claims, in use of evidence, in evaluation of issues, and so forth that can be taken as signs of distinct fields of argument. Thus, the kinds of questions that invite a preliminary description of the argumentation include: what issues are in dispute? what claims are advanced? how are claims supported? what evaluative standards are revealed in the discourse? etc.

It is apparent that a critical study like the one described cannot proceed free from all theoretical assumptions; one must, at the very least, begin with some initial divisions of context or field. However, the critic can recognize those divisions as arbitrary; they may not obtain by the end of the study. The divisions provided by indexes will suffice for an initial partitioning of the literature on Laetrile. Laetrile is listed in indexes that might be classified as legal, medical or scientific, governmental, and popular press. (Some articles are listed in more than one index, a fact that may be useful later in the analysis.)

In this paper, I will first describe the argumentation on Laetrile in the medical/scientific community. Then I will assess what can be said about the medical community as a field of argumentation and I will discuss the place of this particular description of medical argumentation within the larger context of argumentation on Laetrile.

Of all the institutional and professional groups that may confront the Laetrile issue at one time or another, the medical and scientific

community faces the issue perhaps the most directly. Cancer researchers and physicians daily must address questions regarding the effective treatment of cancer and cancer patients. Despite the constant involvement of these individuals with common concerns, their discussion of Laetrile is marked more by disagreement than by agreement. In this section, I will describe the issues that emerge in the discussion of Laetrile in the medical/scientific community. I will begin by describing the literature surveyed and will then specify the issues in dispute and the various positions on those issues.

I examined forty-nine articles published in 1977 and 1978 and indexed in Index Medicus and in a bibliography produced by the National Library of Medicine. These articles appear almost entirely in professional journals; a few articles appear in more popular periodicals such as Science and in related periodicals like the FDA Consumer. Because these articles appear predominately in professional journals, it is reasonable to infer that they are addressed by members of the medical/scientific community to their peers. Authors are generally practicing physicians and/or cancer researchers.

These articles are of three basic types and each type has a different general purpose. One set of articles can be described as scientific studies. Scientific studies offer experimental data in support of a specific, factual claim, e.g. that Laetrile ingestion can cause death; that, in a given experimental situation, Laetrile was ineffective in treating cancer; etc. I would describe a second group of articles as reports. Some of these, "clinical notes," are quite brief and report a particular experience of a physician with a Laetrile user or the results of a study. Others are quite extensive, surveying the historical development of Laetrile, the

theories behind Laetrile's purported curative action, the status of current research and the issues confronting the medical community. This group of articles serves to keep medical practitioners up-to-date on the Laetrile issue. A final group of articles consists of editorials and opinions. This category represents the on-going discussion of Laetrile by health professionals; the editorial section of professional journals offers physicians and researchers an opportunity to assess the data provided in studies and reports, to offer perspectives on the Laetrile problem and to recommend courses of action.[4]

A survey of this body of literature reveals five fundamental issues or questions:[5] (1) What is the nature and cause of the Laetrile problem? (2) Is Laetrile an effective treatment for cancer? (3) Is Laetrile, in itself, harmful? That is, is it toxic? (4) Is the use of Laetrile, even if it is nontoxic, harmful? and (5) What is the appropriate response from the medical community to the Laetrile problem? All of these issues do not appear in every given article but they occur with considerable regularity. Although the amount of disagreement varies from issue to issue, none of these questions produces a unanimous response from the members of the medical community. I will now describe the various positions on the above issues.

Laetrile means different things to different members of the medical community. For some, Laetrile is strictly a scientific problem; it is just another in a long list of purported cancer cures to be tested and evaluated. Although some physicians aver that the problem is an emotional and not a scientific one and argue that Laetrile has already been proven worthless,[6] the continual appearance of studies testing Laetrile and the calls for a clinical trial to establish its merits "once and for all"

indicate that some view Laetrile as primarily a problem of scientific proof.

A second group of physicians and researchers describe Laetrile as an emotional problem. Some authors identify Laetrile simply as an instance of fraudulent quackery and go no further,[7] while others theorize about the causes of the success of this particular quack cure. One reason that is given for the success of Laetrile refers to the nature of medical research and, particularly, the disease of cancer: "So long as conventional medicine cannot cure all patients with cancer some will be willing to try anything they think may help."[8] Several authors cite the failure of the medical community to recognize and attend to the fear of disability and death from cancer as the impetus behing the Laetrile movement. Laetrile, they say, offers hope, if only false hope, and that is more than established medicine sometimes offers.[9]

Yet other writers see the cause of Laetrile's popularity in broader social terms, as an instance of growing public mistrust of the medical profession[10] or as a reflection of a general social attitude of "panaceomania"--a belief in and search for instant solutions.[11] All of these perspectives view Laetrile as a problem regarding the relationship between the medical community and the cancer patient. There is one final, though less frequently expressed, description of the Laetrile problem that arises within this focus. It deals with the relative rights of physicians and patients in any doctor/patient relationship. From this point of view, the Laetrile problem is an ethical issue of freedom to choose treatment.[12]

Of all the issues discussed in the medical/scientific community, the one that commands the most consistent response is whether or not Laetrile is effective in treating or curing cancer. The position of this community

is overwhelmingly that Laetrile is not effective. The most common statement about Laetrile in this literature is that it is ineffective.

Four reasons are given to support this position. First, there is a great deal of argumentation that holds that the theories supporting the chemical action of Laetrile are flawed. The medical/scientific community argues that the explanations of Laetrile's selective release of cyanide to cancer cells cannot be supported and that the theory that Laetrile is a vitamin (vitamin B-17) and that cancer is a vitamin-deficiency disease is likewise flawed.[13] A second group of arguments demonstrates that Laetrile is ineffective by pointing to studies with laboratory animals that show Laetrile to be ineffective.[14] Development of this argument involves primarily evidence indicating a negative evaluation of Laetrile but also includes some refutation of pro-Laetrile studies. Third, physicians argue that clinical studies (case studies) show that Laetrile is ineffective. Development of this argument relies heavily on refutation of pro-Laetrile case studies. Most physicians and researchers regard that evidence as invalid because it is hearsay: "The clinical cases which have been offered in evidence are to the usual testimonial type."[15] However, authors also report individual cases in which Laetrile showed no benefit to a particular patient.[16] The final argument given to prove that Laetrile is ineffective is that, when reputable bodies have studied Laetrile, they have found negative results.[17]

I have found no author in this body of literature who asserts that Laetrile is an effective cancer treatment. One study seemed to offer marginal support for the theory of selective cyanide release[18] but it made no positive claim for Laetrile. Pro-Laetrile studies from sources outside established medicine were often omitted from analysis or dismissed

quickly. Positive results from Laetrile therapy evidenced by established researchers or institutions were often viewed as inconclusive. For example, the National Cancer Institute conducted a retrospective study of Laetrile users. Of the 93 cases submitted to the NCI, only 22 were judged to be evaluable; the others were eliminated because of insuffieient data, because of the presence of conventional therapy along with Laetrile, etc. The conclusions regarding the 22 evaluated cases were as follows: "Seven of the 22 showed progressive disease. Nine showed stable disease. Two cases showed complete disappearance of all cancer and four showed shrinkage of tumors by 50 percent or more."[19] Although this study appears to support Laetrile, the medical community does not give it a great deal of weight; they point out that normal variability may account for some of the results, that judgments from retrospective studies are difficult, and the like.[20]

Perhaps the strongest statement in opposition to the position that Laetrile is ineffective comes from Dr. Charles Moertel of the Mayo Clinic. In arguing in favor of a clinical trial of Laetrile, he acknowledged that Laetrile might be ineffective but noted that "opponents of Laetrile have no more scientifically acceptable evidence to deny its effectiveness than advocates have to claim such effectiveness. The simple fact is that Laetrile has never been properly studied in the hands of those competent to make such a judgment."[21]

The only other opposition to the claim that Laetrile is ineffective comes from those members of the medical community who view the issue as irrelevant. Some physicians and researchers who understand the Laetrile problem as an issue of doctor-patient relationships and those who view Laetrile as an issue of patients' freedom to choose a method of treatment regard a judgment on Laetrile's effectiveness as relatively unimportant.

This group of people regards Laetrile, not as a problem of scientific knowledge, but as a problem of pragmatic professional action.

The third issue discussed in the medical/scientific community is whether or not Laetrile is, in itself, harmful. If Laetrile were effective, of course, the issue of toxicity would be irrelevant; almost all chemotherapeutic agents used in conventional cancer treatment are toxic poisons but their toxicity is tolerated because they are judged to be effective. As an issue of scientific fact, toxicity is much less hotly debated than the issue of effectiveness. However, those who believe that Laetrile is toxic often argue that case vehemently.

Except for one experiment in which large amounts of Laetrile were fed to dogs, some of which subsequently died,[22] most of the support for the claim that Laetrile is toxic comes from about a half-a-dozen case reports of adverse drug reactions ranging from light-headedness and nausea to death.[23] One author claims that Laetrile is, in itself, harmful because of poor quality controls in the manufacturing of the product.[24] Claims of toxicity are usually linked to oral administration of Laetrile; intravenous administration seems to be generally regarded as harmless. Many members of this community simply assume that Laetrile is not toxic.[25] No doubt this assumption is partly based on the fact that Laetrile is a naturally occurring substance that is widely consumed. Furthermore, some early work by established scientists that refuted Laetrile's effectiveness also claimed that Laetrile was nontoxic. Finally, the fact that much in the conventional cancer treatment arsenal is also toxic may reduce the significance of this issue.

The fourth issue discussed in the medical/scientific community is whether or not the <u>use</u> of Laetrile is harmful. Here, the question is not

whether Laetrile itself is toxic but whether the use of an ineffective cancer treatment is harmful. Thus, this issue is premised on the judgment of inefficacy in the second issue. The concerns of the medical community on this issue are threefold. First, they argue that the use of Laetrile is harmful because it may delay or interfere with conventional, presumably more effective, treatment.[26] Second, the use of Laetrile is harmful because the cancer patient stands to incur a considerable financial loss.[27] Finally, widespread use of Laetrile is harmful because it threatens to undermine the system of drug regulation and the consumer protection laws of the United States.[28] Clearly, these concerns are not questions of scientific fact. Rather, they are issues regarding the social effect of the use of a substance that has been judged ineffective scientifically.

The final issue asks what should be the response of the medical/scientific community to the Laetrile problem. The various answers to this question constitute three recommended courses of action: retain the status quo, perhaps with some modifications; conduct a clinical trial of Laetrile; or, legalize Laetrile, either for all or for the terminally ill.

The defenders of the status quo argue that the medical community can do little more than it is doing now. Physicians and researchers must support by their actions and their words the scientific standards that have served them long and well; they must seek to educate a gullible and ill-informed public.[29] Some authors recommend active public relations campaigns against Laetrile, thereby meeting their opponents on their own ground.[30] Others urge stronger anti-quackery laws and more enforcement of them.[31] Finally, several authors suggest that concerted efforts by physicians to become more responsive to the emotional and psychological needs of cancer patients would do much to lessen the appeal of Laetrile

propaganda.[32]

One reason these authors defend the status quo is because they feel compelled by professional ethics to do so. Any deviation from the standard methods of scientific testing represents an unacceptable compromise of scientific integrity.[33] Both a clinical trial and legalization of Laetrile require providing humans with a substance that has not been proven effective, at least in the minds of most physicians. That action violates accepted medical practice. "Clinical research must conform to the moral and scientific principles that justify medical research and should be based on laboratory and animal experiments or other scientifically established fact."[34]

However, other writers feel an equally strong ethical argument for taking some action. In urging a clinical trial, one writer points out that 50,000 Americans already use Laetrile, that 14 states have already legalized it (by 1979, that number was at 21), that newspaper polls show as much as a two-to-one majority in favor of legalizing it and that the condemnatory rhetoric of doctors and scientists has been, at best, ineffective and, at worst, counterproductive; in his view, the true ethics of medicine condemns inaction while thousands of cancer patients are exposed to a drug of unknown effectiveness or safety.[35]

The least radical proposal for action urges a clinical trial of Laetrile. As indicated above, the rationale for a clinical trial stems primarily from a desire to prove, once and for all, that Laetrile is either effective or ineffective. Opponents of a clinical trial contend that more than enough testing has been done already and has shown Laetrile to be worthless.[36] Further, they argue that a clinical trial would have little proof value because it would not convince the public.[37] Proponents

regard current testing as inadequate and regard a clinical trial as the "only established means of proving a drug effective of ineffective, safe or unsafe."[38] They acknowledge that Laetrile zealots may not be convinced but contend that the results of a clinical trial would be persuasive to a great many Americans and would dispel the lingering doubts of health professionals, especially physicians.[39]

It is easy to understand why physicians strongly desire a definitive answer. They face cancer patients daily and, for some of those patients, conventional medicine has nothing left to offer. Furthermore, many physicians reside in states that have legalized a substance that is of unproven benefit; physicians are thus caught in the middle of contradictory scientific and political judgments.

Some physicians recommend more radical action than a clinical trial; they argue that Laetrile should be legalized. Staunch supporters of patients' rights to choose the method of treatment contend that doctors can advise and instruct but that decisions, even bad ones, must be left to the patient. They argue that there is an "obligation to allow patients alternative, nontraditional medical treatment in those cases where that is the only treatment which the patient can accept."[40] Some physicians support legalization for more pragmatic reasons. One argues that "the FDA and other controlling agencies might be most effective in eliminating this quack drug, not by legal prohibition but by permitting its sale and use."[41]

However, most physicians who support the legalization of Laetrile want its use restricted to the terminally ill. Absolute scientific standards of safety and efficacy hold less authority when rational science has no safe and effective treatment to offer and a patient believes that

Laetrile offers a hope.

Opponents of legalizing Laetrile object to the position that patients should be allowed to choose treatment by holding that, because of slick sales techniques of Laetrile propagandists, cancer patients actually have no freedom of choice.[42] Secondly, opponents object on pragmatic grounds. There is, first of all, no clear way to separate the terminal and non-terminal into distinct categories and, further, allowing access by one group will encourage access by others, thus incurring the harms of the use of Laetrile discussed above.[43] Finally, some opponents adhere strictly to the principle that no drug should be allowed until proven safe and effective. Dr. Billingsley reflects the sentiment of these writers: "any man who thinks there is a valid place for Laetrile in therapeutics is a fool."[44]

Given this description of the argumentation among doctors and scientists we can begin to examine whether or not this discourse constitutes a field. It should be remembered that judgments on this question are constrained in two ways. First, Laetrile is only one case; judgments about medical argumentation based solely on the Laetrile example must be held tentatively. Second and more important, without describing other discussions of Laetrile (by lawyers, government officials and the like), we lack a comparative base. I will suggest some comparisons of this discourse with other domains of discourse to the extent that my current research allows; but it is beyond the scope of this paper to document thoroughly such comparisons.

If we assume that this body of discourse represents a field of argument, there must be something that holds it together. I believe that I can report confidently that it is not the content of the argumentation

in itself that distinguishes a field or domain. I have reviewed a high percentage of all literature on Laetrile published in 1977 and 1978. There is no group that fails to address questions of safety and efficacy, patients' rights, proposals for legalization, and so forth. That is, the claim, for example, that Laetrile is unsafe or that patients have a right to choose Laetrile is not restricted to one group of writers.

Content includes not only claims but also the evidence used to support those claims. Again, at this stage of the analysis, there appears to be no absolute restriction of data to particular groups. A variety of interests may refer to, for example, the National Cancer Institute's retrospective study or a particular court decision in supporting their arguments. The inference warranted by that data, of course, varies. But that variability occurs both within and among domains. One might expect Laetrile advocates to examine the scientific literature and conclude that there is as much support for Laetrile as there is against it; but some writers in the established medical community make the same inference. There may yet emerge an identifiable pattern in the selection and use of evidence that typifies a particular field of argument but I am not yet prepared to report one. Ambiguity on this point reflects the need for the comparative base that can be provided by descriptions of discourse in other domains.

One way to look for a unifying content or concept is to examine the relationships among the issues discussed in this community. When I speak of the relationships among issues, I am referring to the interactive evaluation of issues. More specifically, these question must be addressed: Which issue, if any, controls the relevance of the other issues? If none of the issues seems to be controlling, is there a superordinate issue or

system of issues that aligns the lower level issues in a particular way.

First, we can examine whether or not one issue seems to be controlling. One might assume that the controlling issue in the medical/scientific community would be the scientific question of Laetrile's safety and effectiveness. That issue, after all seems to be the one most suited to the particular expertise of this group. While the scientific judgment of safety and efficacy may be the controlling issue for particular members of this discursive community, it cannot function as the guiding concern for this domain because it is not of sufficient scope to embrace the entirity of the concerns of this group; as seen earlier, some members of this group regard judgments on safety and, especially, on efficacy as irrelevant.

A second candidate for the controlling issue in this domain is the definition of the Laetrile problem. The definition of the Laetrile problem does, in large part, determine whether or not issues of safety and efficacy are deemed relevant. It also has some bearing on the course of action proposed but, here, the relationship is not precise. The perspective that views Laetrile as a scientific problem argues either for the maintanence of the status quo or for a clinical trial; the former recommendation sees the scientific problem as already solved with the latter urges a solution by the application of more science.

A variety of positions emerge from the perspective that Laetrile represents an emotional rather than a scientific problem. Some of those who see Laetrile's success as a function of the medical community's failure to adequately address the emotional needs of patients who suffer from a disease that is not one-hundred percent curable advocate increased attention to those emotional needs, sometimes combined with a strengthening

of efforts to educate the public and enforce anti-quackery laws. Others urge a clinical trial on the grounds that it might lessen the emotional appeal of Laetrile for many patients and physicians. Still others advocate making Laetrile available to at least some patients, reasoning that to do so addresses the emotional needs of cancer patients. While all of these positions subordinate the safety and efficacy issues, they do not specify a particular course of action.

The final position on the nature of the Laetrile problem flatly labels the issues of safety and efficacy as irrelevant. This position does so on the grounds that the Laetrile issue is a matter of patients' freedom to choose their own treatment. Thus, scientific judgments of safety and efficacy, although useful to the physician when he or she must recommend a course of treatment, have no bearing on the appropriate course of action. This position recommends that Laetrile be made available to those patients who choose it after consultation with their physician.

The definition of the Laetrile problem, then, controls the course of action generally, but not specifically. Therefore, we must look outside the individual issues discussed in the medical/scientific community for some principle or system that indicates how issues stand in relation to one another.

As one surveys the literature in this domain, one gets a sense of two fundamentally different kinds of concerns that are analytically prior to a specification of the nature of the Laetrile problem. On the one hand, there is a concern for discovering the truth about the claims advanced in support of Laetrile. This concern is sometimes muddled by a general skepticism toward nontraditional treatments,but, within that

middle, there is a genuine desire for a definitive, yes-or-no answer regarding Laetrile's merits. On the other hand, much of the literature addresses the problem of what pragmatic action is appropriate and is consistent with the scientific and ethical standards of the profession. The discussion of appropriate action is independent of the scientific judgment of efficacy in the sense that a decision on action must be made (either individually or by the profession as a whole) regardless of what the scientific judgment is. A scientific judgment may be used in support of a particular course of action but that judgment does not dictate a particular course of action. If this were not true, it would be impossible for a member of this community to argue, for example, that of course Laetrile is ineffective in curing cancer but that its use in some cases may be justified nonetheless.

One way to interpret these two different concerns is to hold that there are really two different professional groups with different unifying purposes operating here. One could identify one group as scientists or medical researchers and the other group as practicing physicians. While these two groups share much in common, each professional group could embrace a different central purpose. This position holds some merit and no doubt accounts for definitions of fields of argument according to unique disciplinary purposes.[45] However, this explanation is problematic in that many of the authors in this discursive domain occupy positions both as practicing physicians and research scientists. Some have administrative roles as well. Furthermore, recommended courses of action are not identified with the roles of researcher or physician.

Alternatively, one could add the interests of the researchers and the practicing physicians together with the interests of such institu-

tional groups as the Food and Drug Administration and the Public Health Service. One might call this "super-group" "Health Professionals" and label their unifying purpose as promoting the general health. This hierarchical move serves to unite individuals in a common interest but it does so only by taking advantage of the ambiguity of the phrase, "promoting the general health." It does not resolve the competing particular concerns of the members of this group; indeed, it may intensify them. Again, at this point in the analysis of the argumentation on Laetrile, it does not appear productive to either create two fields of argument or one, larger field according to disciplinary purposes.

The preceding description of the two dominant concerns expressed in the medical/scientific community invites one more way to look for a unifying concept or system that holds a body of discourse together as a field of argument. The two concerns, represented by researchers on the one hand and practicing physicians on the other also represent two fundamentally different kinds of questions. Hence, they demand two fundamentally different kinds of judgments.

One question is expressed as a question of scientific fact: is Laetrile safe and effective? The other question is expressed as a question of policy or action: should we conduct a clinical trial of Laetrile? should we legalize Laetrile (or support efforts to do so), either for all or for the terminally ill. The latter questions share a focus on policy or action; they differ in that, in the first case, the medical community provides both the advocates and the agents or action while, in the second case, the medical community can advocate but has no power, by itself, to act.

The position I am now describing locates the unity of a field of

argument, not in the content of the argumentation nor in the disciplinary purposes or roles of the arguers, but in the proposition. The proposition cannot specify the particular content of a given argument but it does indicate what issues must be argued about.

Argumentation scholars have acknowledged fundamental issues in policy analysis. This list is representative: (1) Is there an evil in the present system that demands a change? (2) Is there a plan that has the power, means or facility to remove the evil and thereby create an advantage? (3) Will the plan be free from new and greater disadvantages?[46] Arguments are created on each of these issues in order to make a case for or against the policy proposition.

The question of whether or not the medical community should conduct a clinical trial represents a policy question. Thus, argumentation occurs on each of the issues germane to evaluating a policy proposition. Arguments are made about the nature of the Laetrile problem (the evil effect that is objected to) and its cause (something in the present system). The analysis of the causal force in the present system becomes especially critical in the second issue for the inverse of that present causal force is likely to be the plan for removing the problem evidenced in the first issue. That is, if the cause of the Laetrile problem is seen as the failure of the medical community to attend to cancer patients' psychological needs, then it is likely that the proposal will call for greater attention to those needs. Or if the cause of the problem is the lack of adequate testing, the plan may urge a clinical trial--assuming, that is, that a clinical trial constitutes adequate testing. Another way to say this is to say that, in strict causal terms, the cause of the problem or evil in the first issue should be the absence of the proposed plan.

Finally, advocates will build and respond to arguments that claim disadvantageous effects from the adoption of a proposed course of action.

The question of whether Laetrile is effective represents a proposition of scientific fact. I do not label it simply as a proposition of fact; I add the qualified, "scientific," because I suspect that a scientific fact is not the same as, for example, a legal fact. Certainly the question of efficacy is factual in that it demands a yes or no answer. But so are the propositions "Laetrile is/is not a 'new drug' within the meaning of the Federal Food, Drug, Cosmetic Act" and "Laetrile is/is not protected by the constitutional right of privacy."

I am not yet prepared to offer a final conclusion on a set of issues that is inherently connected to a proposition of scientific fact but the argumentation in this field begins to suggest some of those issues. Among them are: Is there some phenomenon that current scientific/medical theory cannot explain? Is there an alternative theory that provides an explanation for that phenomenon? Is the new theory simultaneously able to explain those phenomena explained by current theory? These issues seem to provide a framework for some of the argumentation in the domain under discussion. When addressing Laetrile as a proposition of scientific fact, physicians and researchers often begin by examining the theoretical support for Laetrile. They acknowledge, for example, that much is unknown in the area of cancer research; they object to the theory of Laetrile's action because it cannot explain those types of cancer that appear to be caused by viruses; they object that the Laetrile theories cannot account for, with tests used on other theories, the reduction or elimination of cancer.

In sum, it may be the case that the central determinant of a field

of argument is the nature of the proposition. That proposition points to a set of issues that must be addressed in order to make a judgment on the proposition. Arguments, in turn, are generated on each of the issues. It may be at this level--individual arguments--that the standards of evaluation of a particular disciplinary group come into play. But, even here, the proposition remains of central importance: the issues unique to a particular kind of proposition provide the parameters of at least one kind of evaluation. If one asks, for example, whether there are phenomena that current scientific theory cannot explain, one implies a critical framework for evaluation.

I am currently inclined toward the view that the nature of the proposition provides the most productive way to identify a field of argument. This view seems to account for the literature surveyed in this paper and is productive in that it provides a way to see the connections among all the elements of argumentation: individual arguments and the evidence that supports them, a set of issues that represents a system of analysis, and a decision on a proposition. Further, it recognizes the possibility that a given institution or professional group can address more than one kind of proposition or, alternatively, that a given subject matter may find similar treatment in more than one professional group or institution. However, a great deal more needs to be done to provide support for or against this understanding of fields of argument. I will conclude by describing some of the ways in which that research might proceed.

In this paper, I have reviewed the argumentation about Laetrile in the medical/scientific community that occurred within a two-year period. I have described the issues in dispute, the various positions

on those issues and some of the arguments used to support those positions. If there is one conclusion that is warranted from that description, I think it is this: it is not at all clear whether this literature represents a field of argument and, if it does, what that field of argument is.

In the second half of this paper I have employed one way to investigate whether or not a field of argument exists in this literature. That method was an analysis of the relationship among the issues identified to be in dispute in this community. There are other ways to proceed as well, both in terms of extending this analysis and in terms of providing different levels of analysis. These investigations cannot proceed, however, without broadening the body of literature surveyed.

Since I have looked at the relationships among issues in this paper, the most obvious other level of analysis is the relationships among arguments--individual claims on issues. Suppose, for example, that we were to look at all the arguments supporting the conclusion that Laetrile is ineffective. Clearly, the literature surveyed in this paper is inadequate for that task because, as indicated earlier, every other domain includes someone who makes arguments supporting that conclusion.

Once we can see all of the reasons given for holding that Laetrile is ineffective, then we can extend the analysis of argument fields in a new way. The following questions can be answered. Which reasons appear in only one body of literature? Which reasons appear most frequently? Is the evidence used to support a claim constant or variable? Is the evaluation of evidence constant or variable? On a given claim, do some groups habitually assume a particular premise for which other groups demand supporting material? These questions and others allow the critic to shift the analysis from the relationship among propositions, issues

arguments and evidence within a domain to the relationship between evidence and claims among domains.

I will mention one more way in which this analysis of fields of argument might be extended. Not only can one track arguments across domains; one can also track issues. Now the task becomes to discover the ways in which the meaning and interpretation of an issue becomes transformed by a particular domain. At this level of analysis, the critic is interested in how one domain borrows conclusions on an issue from another domain and adapts those conclusions to its particular purpose.

I have not exhausted the list of ways a critical analysis might proceed. I hope that I have illustrated the productive potential of critical analysis that is rooted in a descritpion of discourse and the need to examine a wide range of that discourse. At the end of this entire study, I should be able to make two kinds of conclusions. One set of conclusions would indicate how we, as a society, reached a judgment on the Laetrile issue. The other set would address the nature of argument fields and how an understanding of argument fields can inform an understanding of social decision-making.

Notes

[1]"Power and Rhetorical Criticism," paper presented in Seminar on Argument Fields and theSociology of Knowledge. Speech Communication Association Convention, Louisville, KY, Nov 4-7, 1982.

[2]For an example of this critical approach, see, Nancy Dunbar and Martha Cooper, "A Situational Perspective for the Study of Legal Argument: A Case Study of Brown v. Board of Education," Dimensions of Argument: Proceedings of the Second Summer Conference on Argumentation (Annandale, VA: Speech Communication Association, Oct. 1981), pp 213-241.

[3]The study described is my dissertation research.

[4]There is some overlap between editorials and reports. When an article appearing in an editorial section of a professional journal provides a report of a physician's experience with Laetrile and does not offer a judgment about Laetrile that extends beyond the particular case, I classify the article as a report. That is, in cases in which an article may be classified in two ways, I follow a functional classification.

[5]There is also an issue of Laetrile's chemical definition but it occurs infrequently in the literature. The members of the medical/scientific community generally assume that they know and agree upon the chemical composition of Laetrile. Laetrile's chemical composition becomes an issue in the governmental literature.

[6]John G. Scott, letter to the editor, New England Journal of Medicine 298 (April 1978): 854.

[7]Joseph R. DePalma, "Laetrile: When is a Drug Not a Drug? American Family Physician 15 (Jan. 1977): 187; "Laetrile: Alleged Cancer Cure," The Medical Journal of Australia 2 (July 1977):76; "Laetrile--Not So Harmless," The Medical Journal of Australia 2 (Sept. 1977): 418.

[8]"Laetrile: Quacks and Freedom," British Medical Journal 1:6052 (Jan. 1077): 3. See also: James H. Price and Joy A. Price, "Laetrile--An Overview," Journal of School Health 48 (Sept. 1978): 409.

[9]John L. Verrilli, letter to the editor, New England Journal of Medicine 298 (April 1978): 854; Scott, p. 854.

[10]A. G. DiBiasio, "The Laetrile Controversy--and the Meaning Behind Public Reaction," Ear, Nose, Throat Journal 56 (Sept. 1977): 347.

[11]Donna K. Thompson, letter to the editor, New England Journal of Medicine 297(July 1977): 219-220.

[12]Leo Lewin, letter to the editor, New England Journal of Medicine 298 (April 1978): 854; "Court Directed Hospital to Permit Laetrile Treatment," Hospital Progress 59 (July 1978): 90.

[13]See, for example: Robert T. Dorr and James Paxinos, "The Current Status of Laetrile," Annals of Internal Medicine 89 (Sept. 1978): 390-391; DePalma, pp. 186-187.

[14]See, for example, Price and Price, pp. 411-412; Dorr and Saxinos, p. 393; "Laetrile: The Making of a Myth," FDA Consumer 10 (Dec./Jan. 1976/1977): 6.

[15]DePalma, p. 187.

[16]See, for example: Paul M. Dainer and Harry J. Long, letter to the editor, New England Journal of Medicine 297 (July 1977):220-221.

[17]"Laetrile: The Making of a Myth," p. 6; "Laetrile: Alleged Cancer Cure," p. 76.

[18]John E. Biaglow and Ralph E. Durand, "The Enhanced Radiation Response of an In Vitro Tumour Model by Cyanide Released From Hydrolysed Amygadalin," International Journal of Radiation Biology 33 (April 1978): 397-401.

[19]William J. Broad, "New Laetrile Study Leaves Cancer Institute in the Pits," Science 202 (Oct. 6, 1978): 36.

[20]Ibid., pp 33-36. For another report of the NCI investigation, see: Neil M. Ellison, David P. Byar and Guy R. Newell, "Special Report on Laetrile: The NCI Laetrile Review," New England Journal of Medicine 299 (Sept. 1978): 549-552.

[21]Charles G. Moertel, "A Trial of Laetrile Now," New England Journal of Medicine 298 (Jan. 1978): 218.

[22]Eric S. Schmidt, George W. Newton, Steven M. Sanders, Jerry P. Lewis and Eric E. Conn, "Laetrile Toxicity in Dogs," Journal of the American Medical Association 239 (March 6, 1978): 943-947.

[23]David M. Maxwell, "Increased Cyanide Values in a Laetrile User," Canadian Medical Association Journal 119 (July 8, 1978): 18; Leonard Sadoff, Kaspar Fuchs and Jonathan Hollander, "Rapid Death Associated with Laetrile Ingestion," Journal of the American Medical Association 239 (April 14, 1978): 1532; James R. Humbert, Jonathan H. Tress and Kathleen T. Briaco, "Fatal Cyanide Poisoning: Accidental Ingestion of Amygdalin," Journal of the American Medical Association 238 (Aug. 1977): 482; Frederick P. Smith, Thomas P. Butler, Stanley Cohan and Philip S. Schein, "Laetrile Toxicity: A Report of Two Cases," Journal of the American Medical Association 238 (Sept. 1977): 1361; "Laetrile--Not So Harmless," p. 418.

[24]J. Paul Davignon, Lawrence A. Trissel and Larry M. Kleinman, "Pharmaceutical Assessment of Amygdalin (Laetrile) Products," Cancer Treatment Reports 62 (Jan. 1978): 99-104.

[25]See, for example, letters to the editor by William Dugan and Charles G. Craddock, New England Journal of Medicine 297 (July 1977): 220.

[26]Price and Price, p. 414.

[27]"Laetrile: The Making of a Myth," p. 8; Cathy Faw, Ron Ballentine, Lois Ballentine and Jan vanEys, "Unproven Cancer Remedies: A Survey of Use in Pediatric Outpatients," Journal of the American Medical Association 238 (Oct. 1977): 1536.

[28]Dorr and Paxinos, p. 395; "Laetrile: The Making of a Myth," p. 8.

[29]"Laetrile: The Making of a Myth," p. 8.

[30]E. James Freeley, letter to the editor, New England Journal of Medicine 297 (July 1977): 219.

[31]Price and Price, p. 414.

[32]Dugan, p. 220.

[33]Ibid.

[34]Mortimer B. Lipsett and John C. Fletcher, "Ethics of Laetrile Clinical Trials," New England Journal of Medicine 297 (Nov. 1977): 1183, quoting the World Medical Association in 1964.

[35]Moertel, pp. 218-219.

[36]"Laetrile: The Making of a Myth," pp. 6-7.

[37]George Crile, Jr., letter to the editor, New England Journal of Medicine 298 (April 1978): 855.

[38]Moertel, p. 219.

[39]DiBiasio, p. 348; Moertel, p. 219.

[40]Arther Zucker, "Terminal and Safe," Journal of Health Politics, Policy and Law 5 (Spring 1980): 7-8.

[41]E. J. Ingelfinger, "Laetrileomania," reprinted in Nutrition Today 12 (Sept./Oct. 1977): 18.

[42]"Laetrile: The Making of a Myth," p. 8.

[43]Moertel, p. 218.

[44]Len A. Billingsley, letter to the editor, New England Journal of Medicine 297 (July 1977): 218.

[45]See, for example, Robert Rowland, "Argument Fields," Dimensions of Argument: Proceedings of the Second Summer Conference on Argumentation (Annandale, Va: Speech Communication Association, Oct. 1981), pp 56-79.

[46]This particular expression of the issues in policy analysis comes from Prof. M. Jack Parker, Northern Illinois University. Further, the position that the proposition is the central determiner of the system

of analysis employed, and hence the argumentation produced, is maintained by Professor Parker. My description of the relationship among the proposition, the issues in the system or analysis and the arguments on those issues comes from him. See: M. Jack Parker, An Application of Stasis Theory to the Treatment of Issues in Intercollegiate Debating, Ph.D. thesis, Southern Illinois University, 1970.